

AN ANNOTATED CHECKLIST OF THE SCORPIONFLIES (MECOPTERA) OF KENTUCKY^{1,2}

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ABSTRACT: Collection data are reported for 17 species representing 3 families of scorpionflies (Mecoptera) from Kentucky. The published record of one further species is discussed.

A number of years ago the authors agreed to collect data on Mecoptera from Kentucky in order to publish a base-line list of the state scorpionfly fauna. Specimens and records from various sources were collected by the first coauthor, and specimens taken in various localities in Kentucky (particularly the Louisville vicinity) by the second coauthor and his students were sent to the first coauthor who determined them. Specimens were also borrowed from the University of Kentucky collection, and the resulting data are included here.

Collection localities and dates of capture are reported here for 17 species in 3 families. Year designations are given when known, except in cases in which many dates are listed for the locality.

Family Meropeidae

Merope tuber Newman. Bernheim Forest, Bullitt Co., in Malaise trap, 22-29 June, 30 June-2 July, and 3-8 July, 1976; Otter Creek Park, Meade Co., at UV light, 10 Aug. 1979; Land Between the Lakes, Trigg Co., 4 June 1965 (see Byers 1973a, 1973b).

Family Panorpidae

Panorpa acuta Carpenter. Paintsville, Johnson Co., 21 June 1966 (see Byers, 1973a).

Panorpa banksi Hine. Bernheim Forest, Bullitt Co., in Malaise trap, 20-23 May 1976; Golden Pond, Trigg Co., June 1964; Land Between the Lakes, Lyon Co., 23 June 1971 (see Byers, 1973a); London, Laurel Co., 17 June 1946; Morehead, Rowan Co. (as Fleming Co. in Byers, 1973a), 3 June 1971.

Panorpa helena Byers. Bell Co., 19 June; Big Black Mountain, Harlan Co., 6 June 1951, 19 June, 9 July 1977, and 12 July 1972; Goldbug, Whitley Co., 10 June 1980; Golden Pond, Trigg Co., in Malaise trap, 25 May-10 June 1964; Jellico, Magoffin Co., 15 Aug.; London, Laurel Co., 17 June 1946; Morgan Co., in UV trap, 23 May 1975; Robertson Co., 23 Aug. 1974; Wolf Creek Lake, Wayne Co., 5 June 1952.

Panorpa hungerfordi Byers. Carter Caves State Park, Carter Co., 30 July 1977.

Panorpa insolens Carpenter. Bernheim Forest, Bullitt Co., in Malaise trap, 20-26 May and 21-23 Aug. 1976; Boone Co., 24 June 1978, 29 June 1980, 19 July 1979, 29 July 1977;

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Brownsboro, Oldham Co., 1 July 1975; Caperton Swamp, Louisville, Jefferson Co., 17 May 1969; Covered Bridge Boy Scout Reservation, Oldham Co., 30 April, 8 May, 17-22 June, 11 and 27 Aug., 15 Sept.; Goshen, Oldham Co., 21 Sept. 1971; Harrod's Creek, 10 miles NE of Louisville, Oldham Co., 21 June 1968; Horner Wildlife Sanctuary, Oldham Co., 1 July, 4-5 Sept.; Jessamine Creek, Jessamine Co., 26 May 1971; Jessamine Co., in Malaise trap, 7-14 Sept. 1974; Louisville vic., Jefferson Co., 18 and 28 April, 1-31 May, 11-27 June, 5 July, 30 Aug., and 16 Sept.; Oldham Co., 8-17 May, 30 July, and 6-12 Aug. This species has been discussed by Byers (1973a: 372).

Panorpa isolata Carpenter. Goldbug, Whitley Co., 28 Aug. 1976; Hazel Patch, Laurel Co., 5 June 1981.

Panorpa longicornis Carpenter. Big Black Mountain, Harlan Co., 9 July 1977.

Panorpa nebulosa Westwood. Bernheim Forest, Bullitt Co., in Malaise trap, 23-26 May 1976 (also netted 21 May 1966); Carter Caves State Park, Carter Co., 30 July 1977; Cumberland Falls State Park, Whitley Co., 6 June 1960 and 24 June 1952; Golden Pond, Trigg Co., in Malaise trap, 25 May-5 June 1964; Harlan Co., 19 June; Laurel Co., 29 June 1980; Levi Jackson State Park, 4 miles SE of London, Laurel Co., 8 June 1969; Louisville, Jefferson Co., 22 April 1966; Natural Bridge State Park, Powell Co., 26 May 1974.

Panorpa speciosa Carpenter. Boone Co., 19 July 1979; Covered Bridge Boy Scout Reservation, Oldham Co., 17 June 1976, 30 July 1974, 11 and 13 Aug. 1974, and 15 Sept. 1976; Louisville, Jefferson Co., 25 May 1968, 12 Aug. 1974, 7 Oct. 1976, St. Matthews, Jefferson Co., 8 Aug. 1974 and 4 Sept. 1976.

Panorpa submaculosa Carpenter. Bell Co., 2 July; Big Black Mountain, Harlan Co., 14 July 1979; Kingdom Come State Park, Harlan Co., 13 July 1979; Levi Jackson State Park, 4 miles SE of London, Laurel Co., 8 June 1969; Pine Mountain State Park, Bell Co., 18 June 1968.

Panorpa new sp. (undescribed) near *virginica* Banks. Barren River State Park, Barren Co., 2 Oct. 1979; Kenlake State Park, Calloway Co., 17 Sept. 1979; Slade, Powell Co., 3 Oct. 1976.

Family Bittacidae

Bittacus occidentis Walker. Laurel Co., 27 May; Lexington, Fayette Co., 5 Sept. 1976; Louisville, Jefferson Co., 9 Sept. 1953 (see Byers, 1973a); Perry Co., 7 June.

Bittacus pilicornis Westwood. Brownsboro, Oldham Co., 1 July 1975; Covered Bridge Boy Scout Reservation, Oldham Co., 31 June 1968.

Bittacus stigmaterus Say. Anchorage, Jefferson Co., 27 July 1952; Jessamine Co., 1 mile W of Spears, 27 Aug. 1971; Oldham Co., 30 July 1974 and 8 Sept.; Sleepy Hollow, Oldham Co., 9 Aug. 1951.

Bittacus strigosus Hagen. Big Bone Lick State Park, Boone Co., 17 June 1970; Caperton Swamp, Louisville, Jefferson Co., 8 July 1965; Covered Bridge Boy Scout Reservation, Oldham Co., 21 June 1968 and 26 July 1966; Frankfort, Franklin Co., 23 June; Harrod's Creek, 10 miles NE of Louisville, Oldham Co., 21 June 1968; Anchorage, Jefferson Co., 27 June and 1 July 1959; Jefferson Co., 30 June 1960; Louisville, Jefferson Co., 19 June 1975.

Hylobittacus apicalis (Hagen). Covered Bridge Boy Scout Reservation, Oldham Co., 21 June 1968; Doe Run area near Muldraugh, Meade Co., 3 July 1971; Frankfort, Franklin Co., 23 June; Horner Wildlife Sanctuary, Oldham Co., 24 June 1965 and 1 July 1975; Louisville, Jefferson Co., 30 May 1955 and 1965, 1 June 1955, and 23 June 1971; Jefferson Co., 4 Aug. 1974.

In addition to the species listed above, *Panorpa americana* Swederus was reported by Hagen from Kentucky (Carpenter, 1931). However, we consider that record to be questionable, the range of that species being well to the south and east of Kentucky on the basis of specimens seen. Other

species certainly occur in Kentucky, but definite records are not known to us. These include species reported from adjacent states, such as *Panorpa anomala* Carpenter, *P. debilis* Westwood, *P. latipennis* Hine, *P. maculosa* Hagen, and *Bittacus punctiger* Westwood. The authors will continue the search for these and other species, and welcome the opportunity to examine material that readers may have taken in Kentucky.

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Nine papers in part one are on neuroendocrine regulation of endocrine glands; ecdysis, pupariation, & diapause; developmental response to juvenile hormone; and biochemical changes in cuticular proteins. Part two contains seven papers on digestive enzymes, lipid & carbohydrate requirements and dietetic complexities of plant-insect interactions.

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The story of entomology and the struggles of man vs. insects on the prairies of the four western provinces of Canada from the earliest explorers to the Second World War.